The Class of 2050

G ood morning children", says the teacher on entering the room. "Good morning Miss Houghton", reply the children in unison. So not much change in the classroom over the last few hundreds of years, you might think.

In practice the process of learning is remarkably similar – it is just the technology that is allowing us to do so much more.

This morning the children arrived at school and were given access to the building immediately their implanted identification chip had been read. Their presence in the school was automatically registered on the building occupancy role, and a message sent to their parents announcing their safe arrival.

The children then proceeded to their classroom and placed their personal *e-*book on their desk. The two devices exchanged identities and the homework completed yesterday evening is uploaded into their personal working space. Once the work is in the classroom electronic environment the "teaching assistant" (a software platform rather than the human of years long gone by) examines and grades the work – flagging particularly good work for the teacher's attention, and substandard efforts for correction.

"This morning children we will be working on our foreign language skills. Your language will be assigned by your language tutor." The children put on their noise cancelling headphones (just like the ones that were used on plane journeys 50 years ago) and enter their own acoustic bubble. The whole of the desktop before each student becomes an active area upon which information is displayed using a "paper metaphor". These paper icons can be moved, edited and discarded just like the word-processors of the late 20th century, but now it is done by hand gestures and pressure placed on the screen. The vertical screen at the front of the desk illuminates and displays the personal language tutor, a computer generated person, who commences the lesson from the stored student records and works at the level and speed the child finds comfortable. Miss Houghton can monitor each student's progress and even become part of the lesson – appearing on the screen with the personal language tutor.

School lunch looks just like school lunches have done for many years, although these days each meal is composed to give exactly the correct nutritional and calorie content for each child based on the record of activities and other food intake reported from the implanted chip bio-metre. In the afternoon the class starts its new science project in combination with a partnering school in Helsinki. The wall of the classroom, which up to now had been displaying a view of an exterior landscape, even though the classroom has no actual windows, suddenly changes and there appears to be an extension to the room in which there is another group of children. The children can communicate and show examples of plants and

trees they have collected and experiment about the different growing patterns in different climates. Most of the children do not even realise that this is not just a science class but also a cultural experience and a language class. The less able children use the wirelessly connected headphones again and hear the original sounds of the language in one ear and an auto translation in the other. Educational psychologists have recently found that this method allows children to absorb languages much faster. It was feared that the advent of the auto-translator would remove the need to learn any other language – but the ease of acquiring language has made it almost a game!

A lot of education these days would have been classified as game playing at the beginning of the century. The use of networked 3D displays allows children to experience the structures of both living and inanimate things. With the newly invented "exoskeleton glove" a child can even reach into the display and experience textures, weights and dynamic forces.

Examinations are still seen as essential, but they are not like the old experience of rows and rows of wooded desks and the laborious crafting of written words onto sheets of paper! These days examinations can be taken almost anywhere, even at home! The interactive working area enrolls the student by both implanted chip ID, and by Iris recognition. The iris is the coloured part of the eye, and whilst the colour might change during your lifetime the bar structure is constant and can be used for recognition purposes. Questions can be answered by manipulation of the active surfaces of the working area, and voice responses can also be used as verification that the student is the one who should be sitting the examination.

Many question these days why there is still a need to attend a school at all. Surely with all the networks and abilities to experience at a distance learning could be done from home. In practice this is used when a child has an infectious disease – technology has not yet found a cure for childhood illness. It is quite practical to sit at the interactive desk and see the rest of the class on the screen, or even join small group activities apparently clustering around a singe desk.

However, we must always remember that schooling is much more than just learning. Despite all the new technology and the fact that we all now in 2050 are each personally associated with over 10,000 processors, we must remember that schooling is also a social occasion. Even though sometimes that interaction might be through a wall sized display module.